Assignment -3

Python Programming

Assignment Date	12 October 2022
Student Name	Mr. Kathiravan.A
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Maximum Marks	2 Marks

Question-1:

Write a python code for blinking LED and Traffic Lights for Raspberry Pi. Only python code is enough, no need to execute in Raspberry

#Python code for blinding LED

```
import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

from time import sleep # Import the sleep function from the time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BOARD) # Use physical pin numbering

GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin and set initial value to low (off)

while True: # Run forever

GPIO.output(8, GPIO.HIGH) # Turn on

sleep(1) # Sleep for 1 second

GPIO.output(8, GPIO.LOW) # Turn off

sleep(1) # Sleep for 1 second
```

#Traffic lights for Raspberry Pi

```
import RPi.GPIO as GPIO

import time

import signal

import sys

# Setup

GPIO.setmode(GPIO.BCM)

GPIO.setup(9, GPIO.OUT)

GPIO.setup(10, GPIO.OUT)

GPIO.setup(11, GPIO.OUT)

# Turn off all lights when user ends demo
```

```
def allLightsOff(signal, frame):
 GPIO.output(9, False)
 GPIO.output(10, False)
 GPIO.output(11, False)
 GPIO.cleanup()
 sys.exit(0)
signal.signal(signal.SIGINT, allLightsOff)
# Loop forever
while True:
 # Red
 GPIO.output(9, True)
 time.sleep(3)
 # Red and amber
 GPIO.output(10, True)
 time.sleep(1)
 # Green
 GPIO.output(9, False)
 GPIO.output(10, False)
 GPIO.output(11, True)
 time.sleep(5)
 # Amber
 GPIO.output(11, False)
 GPIO.output(10, True)
 time.sleep(2)
 # Amber off (red comes on at top of loop)
 GPIO.output(10, False)
```